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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: SHINJI SHIRAKAWA ET AL

Serial No.: NOT YET ASSIGNED

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Title: POWER CONVERSION APPARATUS AND MOBILE OBJECT INCORPORATING THEREOF

PRELIMINARY AMENDMENT

Box PATENT APPLICATION
Commissioner for Patents
Washington, D.C. 20231

Sir:

Please enter the following amendments to the claims prior to the examination of the application.

IN THE CLAIMS:

Please amend claims 11, 13, 14 and 15 as follows:

(A copy of the marked-up version of the amended claims are attached to this Preliminary Amendment).

11. (Amended) A power conversion apparatus as set forth in claim 1, characterized in that the input terminals have the conductors located on the lower side thereof are extended inward by a length longer than that of the conductor located on the upper side thereof.

13. (Amended) A mobile object comprising a vehicle body, front and rear wheels rotatably mounted to the vehicle body, a motor for driving either of the front and rear wheels, a battery device for accumulating drive power fed to the motor, and a power conversion apparatus for converting D.C. power fed from the battery device, into A.C. power, characterized in that a power conversion apparatus as set forth in claim 1 is used as the power conversion apparatus.

14. (Amended) A mobile object comprising a vehicle body, front and rear wheels rotatably mounted to the vehicle body, an internal combustion engine for driving either of the front and rear wheels, a motor for driving, instead of the internal combustion engine, either of the front and rear wheels, a battery device for accumulating drive power fed to the motor, and a power conversion apparatus for converting D.C. power fed from the battery device, into A.C. power, characterized in that a power conversion apparatus as set forth in claim 1 is used as the power conversion apparatus.

15. (Amended) A mobile object comprising a vehicle body, front and rear wheels rotatably mounted to the vehicle body, an internal combustion engine for driving either of the front and rear wheels, a motor for driving the other of the front and rear wheels, a battery device for accumulating drive power fed to the motor, and a power conversion apparatus for converting D.C. power fed from the battery device, into A.C. power, characterized in that a power conversion apparatus as set forth in claim 1 is used as the power conversion apparatus.

Please add new claims 16-57 as follows:

16. (new) A power conversion apparatus as set forth in claim 2, characterized in that the input terminals have the conductors located on the lower side thereof are extended inward by a length longer than that of the conductor located on the upper side thereof.

17. (new) A power conversion apparatus as set forth in claim 3, characterized in that the input terminals have the conductors located on the lower side thereof are extended inward by a length longer than that of the conductor located on the upper side thereof.

18. (new) A power conversion apparatus as set forth in claim 4, characterized in that the input terminals have the conductors located on the lower side thereof are extended inward by a length longer than that of the conductor located on the upper side thereof.

19. (new) A power conversion apparatus as set forth in claim 5, characterized in that the input terminals have the conductors located on the lower side thereof are extended inward by a length longer than that of the conductor located on the upper side thereof.

20. (new) A power conversion apparatus as set forth in claim 6, characterized in that the input terminals have the conductors located on the

lower side thereof are extended inward by a length longer than that of the conductor located on the upper side thereof.

21. (new) A power conversion apparatus as set forth in claim 7, characterized in that the input terminals have the conductors located on the lower side thereof are extended inward by a length longer than that of the conductor located on the upper side thereof.

22. (new) A power conversion apparatus as set forth in claim 8, characterized in that the input terminals have the conductors located on the lower side thereof are extended inward by a length longer than that of the conductor located on the upper side thereof.

23. (new) A power conversion apparatus as set forth in claim 9, characterized in that the input terminals have the conductors located on the lower side thereof are extended inward by a length longer than that of the conductor located on the upper side thereof.

24. (new) A power conversion apparatus as set forth in claim 10, characterized in that the input terminals have the conductors located on the lower side thereof are extended inward by a length longer than that of the conductor located on the upper side thereof.

25. (new) A mobile object comprising a vehicle body, front and rear wheels rotatably mounted to the vehicle body, a motor for driving either of the front and rear wheels, a battery device for accumulating drive power fed to the motor, and a power conversion apparatus for converting D.C. power fed from the battery device, into A.C. power, characterized in that a power conversion apparatus as set forth in claim 2 is used as the power conversion apparatus.

26. (new) A mobile object comprising a vehicle body, front and rear wheels rotatably mounted to the vehicle body, a motor for driving either of the front and rear wheels, a battery device for accumulating drive power fed to the motor, and a power conversion apparatus for converting D.C. power fed from the battery device, into A.C. power, characterized in that a power conversion apparatus as set forth in claim 3 is used as the power conversion apparatus.

27. (new) A mobile object comprising a vehicle body, front and rear wheels rotatably mounted to the vehicle body, a motor for driving either of the front and rear wheels, a battery device for accumulating drive power fed to the motor, and a power conversion apparatus for converting D.C. power fed from the battery device, into A.C. power, characterized in that a power conversion apparatus as set forth in claim 4 is used as the power conversion apparatus.

28. (new) A mobile object comprising a vehicle body, front and rear wheels rotatably mounted to the vehicle body, a motor for driving either of the

front and rear wheels, a battery device for accumulating drive power fed to the motor, and a power conversion apparatus for converting D.C. power fed from the battery device, into A.C. power, characterized in that a power conversion apparatus as set forth in claim 5 is used as the power conversion apparatus.

29. (new) A mobile object comprising a vehicle body, front and rear wheels rotatably mounted to the vehicle body, a motor for driving either of the front and rear wheels, a battery device for accumulating drive power fed to the motor, and a power conversion apparatus for converting D.C. power fed from the battery device, into A.C. power, characterized in that a power conversion apparatus as set forth in claim 6 is used as the power conversion apparatus.

30. (new) A mobile object comprising a vehicle body, front and rear wheels rotatably mounted to the vehicle body, a motor for driving either of the front and rear wheels, a battery device for accumulating drive power fed to the motor, and a power conversion apparatus for converting D.C. power fed from the battery device, into A.C. power, characterized in that a power conversion apparatus as set forth in claim 7 is used as the power conversion apparatus.

31. (new) A mobile object comprising a vehicle body, front and rear wheels rotatably mounted to the vehicle body, a motor for driving either of the front and rear wheels, a battery device for accumulating drive power fed to the motor, and a power conversion apparatus for converting D.C. power fed from the

battery device, into A.C. power, characterized in that a power conversion apparatus as set forth in claim 8 is used as the power conversion apparatus.

32. (new) A mobile object comprising a vehicle body, front and rear wheels rotatably mounted to the vehicle body, a motor for driving either of the front and rear wheels, a battery device for accumulating drive power fed to the motor, and a power conversion apparatus for converting D.C. power fed from the battery device, into A.C. power, characterized in that a power conversion apparatus as set forth in claim 9 is used as the power conversion apparatus.

33. (new) A mobile object comprising a vehicle body, front and rear wheels rotatably mounted to the vehicle body, a motor for driving either of the front and rear wheels, a battery device for accumulating drive power fed to the motor, and a power conversion apparatus for converting D.C. power fed from the battery device, into A.C. power, characterized in that a power conversion apparatus as set forth in claim 10 is used as the power conversion apparatus.

34. (new) A mobile object comprising a vehicle body, front and rear wheels rotatably mounted to the vehicle body, a motor for driving either of the front and rear wheels, a battery device for accumulating drive power fed to the motor, and a power conversion apparatus for converting D.C. power fed from the battery device, into A.C. power, characterized in that a power conversion apparatus as set forth in claim 11 is used as the power conversion apparatus.

35. (new) A mobile object comprising a vehicle body, front and rear wheels rotatably mounted to the vehicle body, a motor for driving either of the front and rear wheels, a battery device for accumulating drive power fed to the motor, and a power conversion apparatus for converting D.C. power fed from the battery device, into A.C. power, characterized in that a power conversion apparatus as set forth in claim 12 is used as the power conversion apparatus.

36. (new) A mobile object comprising a vehicle body, front and rear wheels rotatably mounted to the vehicle body, an internal combustion engine for driving either of the front and rear wheels, a motor for driving, instead of the internal combustion engine, either of the front and rear wheels, a battery device for accumulating drive power fed to the motor, and a power conversion apparatus for converting D.C. power fed from the battery device, into A.C. power, characterized in that a power conversion apparatus as set forth in claim 2 is used as the power conversion apparatus.

37. (new) A mobile object comprising a vehicle body, front and rear wheels rotatably mounted to the vehicle body, an internal combustion engine for driving either of the front and rear wheels, a motor for driving, instead of the internal combustion engine, either of the front and rear wheels, a battery device for accumulating drive power fed to the motor, and a power conversion apparatus for converting D.C. power fed from the battery device, into A.C. power,

characterized in that a power conversion apparatus as set forth in claim 3 is used as the power conversion apparatus.

38. (new) A mobile object comprising a vehicle body, front and rear wheels rotatably mounted to the vehicle body, an internal combustion engine for driving either of the front and rear wheels, a motor for driving, instead of the internal combustion engine, either of the front and rear wheels, a battery device for accumulating drive power fed to the motor, and a power conversion apparatus for converting D.C. power fed from the battery device, into A.C. power, characterized in that a power conversion apparatus as set forth in claim 4 is used as the power conversion apparatus.

39. (new) A mobile object comprising a vehicle body, front and rear wheels rotatably mounted to the vehicle body, an internal combustion engine for driving either of the front and rear wheels, a motor for driving, instead of the internal combustion engine, either of the front and rear wheels, a battery device for accumulating drive power fed to the motor, and a power conversion apparatus for converting D.C. power fed from the battery device, into A.C. power, characterized in that a power conversion apparatus as set forth in claim 5 is used as the power conversion apparatus.

40. (new) A mobile object comprising a vehicle body, front and rear wheels rotatably mounted to the vehicle body, an internal combustion engine for

driving either of the front and rear wheels, a motor for driving, instead of the internal combustion engine, either of the front and rear wheels, a battery device for accumulating drive power fed to the motor, and a power conversion apparatus for converting D.C. power fed from the battery device, into A.C. power, characterized in that a power conversion apparatus as set forth in claim 6 is used as the power conversion apparatus.

41. (new) A mobile object comprising a vehicle body, front and rear wheels rotatably mounted to the vehicle body, an internal combustion engine for driving either of the front and rear wheels, a motor for driving, instead of the internal combustion engine, either of the front and rear wheels, a battery device for accumulating drive power fed to the motor, and a power conversion apparatus for converting D.C. power fed from the battery device, into A.C. power, characterized in that a power conversion apparatus as set forth in claim 7 is used as the power conversion apparatus.

42. (new) A mobile object comprising a vehicle body, front and rear wheels rotatably mounted to the vehicle body, an internal combustion engine for driving either of the front and rear wheels, a motor for driving, instead of the internal combustion engine, either of the front and rear wheels, a battery device for accumulating drive power fed to the motor, and a power conversion apparatus for converting D.C. power fed from the battery device, into A.C. power,

characterized in that a power conversion apparatus as set forth in claim 8 is used as the power conversion apparatus.

43. (new) A mobile object comprising a vehicle body, front and rear wheels rotatably mounted to the vehicle body, an internal combustion engine for driving either of the front and rear wheels, a motor for driving, instead of the internal combustion engine, either of the front and rear wheels, a battery device for accumulating drive power fed to the motor, and a power conversion apparatus for converting D.C. power fed from the battery device, into A.C. power, characterized in that a power conversion apparatus as set forth in claim 9 is used as the power conversion apparatus.

44. (new) A mobile object comprising a vehicle body, front and rear wheels rotatably mounted to the vehicle body, an internal combustion engine for driving either of the front and rear wheels, a motor for driving, instead of the internal combustion engine, either of the front and rear wheels, a battery device for accumulating drive power fed to the motor, and a power conversion apparatus for converting D.C. power fed from the battery device, into A.C. power, characterized in that a power conversion apparatus as set forth in claim 10 is used as the power conversion apparatus.

45. (new) A mobile object comprising a vehicle body, front and rear wheels rotatably mounted to the vehicle body, an internal combustion engine for

driving either of the front and rear wheels, a motor for driving, instead of the internal combustion engine, either of the front and rear wheels, a battery device for accumulating drive power fed to the motor, and a power conversion apparatus for converting D.C. power fed from the battery device, into A.C. power, characterized in that a power conversion apparatus as set forth in claim 11 is used as the power conversion apparatus.

46. (new) A mobile object comprising a vehicle body, front and rear wheels rotatably mounted to the vehicle body, an internal combustion engine for driving either of the front and rear wheels, a motor for driving, instead of the internal combustion engine, either of the front and rear wheels, a battery device for accumulating drive power fed to the motor, and a power conversion apparatus for converting D.C. power fed from the battery device, into A.C. power, characterized in that a power conversion apparatus as set forth in claim 12 is used as the power conversion apparatus.

47. (new) A mobile object comprising a vehicle body, front and rear wheels rotatably mounted to the vehicle body, an internal combustion engine for driving either of the front and rear wheels, a motor for driving the other of the front and rear wheels, a battery device for accumulating drive power fed to the motor, and a power conversion apparatus for converting D.C. power fed from the battery device, into A.C. power, characterized in that a power conversion apparatus as set forth in claim 2 is used as the power conversion apparatus.

48. (new) A mobile object comprising a vehicle body, front and rear wheels rotatably mounted to the vehicle body, an internal combustion engine for driving either of the front and rear wheels, a motor for driving the other of the front and rear wheels, a battery device for accumulating drive power fed to the motor, and a power conversion apparatus for converting D.C. power fed from the battery device, into A.C. power, characterized in that a power conversion apparatus as set forth in claim 3 is used as the power conversion apparatus.

49. (new) A mobile object comprising a vehicle body, front and rear wheels rotatably mounted to the vehicle body, an internal combustion engine for driving either of the front and rear wheels, a motor for driving the other of the front and rear wheels, a battery device for accumulating drive power fed to the motor, and a power conversion apparatus for converting D.C. power fed from the battery device, into A.C. power, characterized in that a power conversion apparatus as set forth in claim 4 is used as the power conversion apparatus.

50. (new) A mobile object comprising a vehicle body, front and rear wheels rotatably mounted to the vehicle body, an internal combustion engine for driving either of the front and rear wheels, a motor for driving the other of the front and rear wheels, a battery device for accumulating drive power fed to the motor, and a power conversion apparatus for converting D.C. power fed from the battery device, into A.C. power, characterized in that a power conversion apparatus as set forth in claim 5 is used as the power conversion apparatus.

51. (new) A mobile object comprising a vehicle body, front and rear wheels rotatably mounted to the vehicle body, an internal combustion engine for driving either of the front and rear wheels, a motor for driving the other of the front and rear wheels, a battery device for accumulating drive power fed to the motor, and a power conversion apparatus for converting D.C. power fed from the battery device, into A.C. power, characterized in that a power conversion apparatus as set forth in claim 6 is used as the power conversion apparatus.

52. (new) A mobile object comprising a vehicle body, front and rear wheels rotatably mounted to the vehicle body, an internal combustion engine for driving either of the front and rear wheels, a motor for driving the other of the front and rear wheels, a battery device for accumulating drive power fed to the motor, and a power conversion apparatus for converting D.C. power fed from the battery device, into A.C. power, characterized in that a power conversion apparatus as set forth in claim 7 is used as the power conversion apparatus.

53. (new) A mobile object comprising a vehicle body, front and rear wheels rotatably mounted to the vehicle body, an internal combustion engine for driving either of the front and rear wheels, a motor for driving the other of the front and rear wheels, a battery device for accumulating drive power fed to the motor, and a power conversion apparatus for converting D.C. power fed from the battery device, into A.C. power, characterized in that a power conversion apparatus as set forth in claim 8 is used as the power conversion apparatus.

54. (new) A mobile object comprising a vehicle body, front and rear wheels rotatably mounted to the vehicle body, an internal combustion engine for driving either of the front and rear wheels, a motor for driving the other of the front and rear wheels, a battery device for accumulating drive power fed to the motor, and a power conversion apparatus for converting D.C. power fed from the battery device, into A.C. power, characterized in that a power conversion apparatus as set forth in claim 9 is used as the power conversion apparatus.

55. (new) A mobile object comprising a vehicle body, front and rear wheels rotatably mounted to the vehicle body, an internal combustion engine for driving either of the front and rear wheels, a motor for driving the other of the front and rear wheels, a battery device for accumulating drive power fed to the motor, and a power conversion apparatus for converting D.C. power fed from the battery device, into A.C. power, characterized in that a power conversion apparatus as set forth in claim 10 is used as the power conversion apparatus.

56. (new) A mobile object comprising a vehicle body, front and rear wheels rotatably mounted to the vehicle body, an internal combustion engine for driving either of the front and rear wheels, a motor for driving the other of the front and rear wheels, a battery device for accumulating drive power fed to the motor, and a power conversion apparatus for converting D.C. power fed from the

battery device, into A.C. power, characterized in that a power conversion apparatus as set forth in claim 11 is used as the power conversion apparatus.

57. (new) A mobile object comprising a vehicle body, front and rear wheels rotatably mounted to the vehicle body, an internal combustion engine for driving either of the front and rear wheels, a motor for driving the other of the front and rear wheels, a battery device for accumulating drive power fed to the motor, and a power conversion apparatus for converting D.C. power fed from the battery device, into A.C. power, characterized in that a power conversion apparatus as set forth in claim 12 is used as the power conversion apparatus.

Applicants' remarks are set forth herein below starting on the following page).

REMARKS

Entry of the amendments to the claims before examination of the application is respectfully requested. These claims have been amended to remove multiple dependencies.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #381AS/50803).

Respectfully submitted,

December 21, 2001

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

Please amend claims 11, 13, 14 and 15 as follows:

11. (Amended) A power conversion apparatus as set forth in [any one of claims 1 to 10] claim 1, characterized in that the input terminals have the conductors located on the lower side thereof are extended inward by a length longer than that of the conductor located on the upper side thereof.

13. (Amended) A mobile object comprising a vehicle body, front and rear wheels rotatably mounted to the vehicle body, a motor for driving either of the front and rear wheels, a battery device for accumulating drive power fed to the motor, and a power conversion apparatus for converting D.C. power fed from the battery device, into A.C. power, characterized in that a power conversion apparatus as set forth in [any one of claims 1 to 12] claim 1 is used as the power conversion apparatus.

14. (Amended) A mobile object comprising a vehicle body, front and rear wheels rotatably mounted to the vehicle body, an internal combustion engine for driving either of the front and rear wheels, a motor for driving, instead of the internal combustion engine, either of the front and rear wheels, a battery device for accumulating drive power fed to the motor, and a power conversion apparatus for converting D.C. power fed from the battery device, into A.C. power, characterized in that a power conversion apparatus as set forth in [any one of claims 1 to 12] claim 1 is used as the power conversion apparatus.

15. (Amended) A mobile object comprising a vehicle body, front and rear wheels rotatably mounted to the vehicle body, an internal combustion engine for driving either of the front and rear wheels, a motor for driving the other of the front and rear wheels, a battery device for accumulating drive power fed to the motor, and a power conversion apparatus for converting D.C. power fed from the battery device, into A.C. power, characterized in that a power conversion apparatus as set forth in [any one of claims 1 to 12] claim 1 is used as the power conversion apparatus.